

Preamps and Preamp Mixers

2A37, 2A40, 2A45, 2A68A, 2A96A



Overview

2A40 and 2A45 Preamps

The Edwards Model 2A40 Dual Stereo Summing Input Module provides auxiliary level inputs to any Edwards modular audio component from two stereo sources (left and right). The Edwards Model 2A45 Dual Input Module is a dual input, dual level, auxiliary input module, and provides selectable gain (1V or 0.1V) on each input.

2A96A Mixer-Preamplifier

The Edwards Mixer/Preamplifier Model 2A96A has the capacity of accepting eight program inputs (four Edwards Input Modules) and a bridging input. The Mixer/Preamplifier has the latest circuit technology to maintain low distortion (THD) and signal-to-noise ratio. Dual, single-ended outputs can be converted into an active, balanced output. The dual outputs are desirable for driving individual channel amplifiers. The Mixer/Preamplifier allows for priority muting.

The unit's mounting brackets can be removed for table-top mounting in a finished enclosure. The Mixer/Preamplifier has eight individual level controls, bass and treble controls, master volume control, lighted AC power switch and a tone control bypass switch.

2A68A Remote Powered Mixer-Preamplifier

The 2A68A Remote Powered Mixer-Preamplifier provides facilities for two low Z microphone inputs, one auxiliary input, and a bridging input. The microphone inputs are transformer-coupled, and the unit is protected from radio frequency interference. The panel provides a single-ended audio output of 1Vrms (nominal) and is powered by a remote DC power supply with a minimum capacity of 50mA. The controls include individual microphone level controls, an auxiliary fader control, bass and treble controls, and a master volume control.

Standard Features

2A37 Input Module

- Excellent frequency response
- Dual input module
- Selectable inputs
- Low frequency roll-off

2A40 Dual Stereo Summing Input Module

- Excellent frequency response
- Dual stereo inputs

2A45 Dual Input Module

- Selectable gain
- Excellent frequency response
- Dual input module

2A96A Mixer-Preamplifier

- Modular Concept
- Master/Slave Architecture
- Low Distortion and Noise
- Priority Muting
- Protective Polycarbonate Panel Overlay
- Color-Coded, Calibrated LED Level Display
- Rack Mount or Table-Top

2A68A Remote Powered Mixer-preamplifier

- Low distortion and noise
- Transformer-coupled microphone inputs
- Protected from radio frequency interference
- DC Powered

Engineers' Specification

2A37 Dual Input Module

The dual input module shall be the Edwards Model 2A37 or an approved equal. The module shall provide two inputs, each selectable for low impedance (transformer isolated) microphone or auxiliary.

The signal-to-noise ratio (based on 70V output of Edwards mixer/amplifiers, 20Hz to 20,000Hz bandwidth limited) shall be at least 60dB for microphones and 65dB for auxiliaries. The frequency response shall be 20Hz to 20,000Hz, plus or minus 1dB.

The module microphone gain shall be 45dB (nominal) and the module shall have a sensitivity of 300 microvolts. The source impedance for the microphone input shall be 150 ohms to 200 ohms and the auxiliary source impedance shall be 10k ohms. The microphone input connection shall be a screw terminal type and the auxiliary input connectors shall be RCA pin jacks.

Each microphone input shall have a selection switch for low frequency roll-off of 320Hz at a 6dB/octave rate. Two additional switches shall be provided for input selection.

The module power consumption shall be ± 15 Vdc (regulated) at 10mA. The module shall be 3 inches (7.6 cm) wide by 3 inches (7.6 cm) high and 5-1/4 inches (13.4 cm) deep, and shall weigh 10.5 ounces (297.7 g).



2A40 Dual Input Module

The dual input module shall be Edwards Model 2A40 or approved equal. The module shall be a dual stereo summing input module providing auxiliary level inputs to any Edwards modular audio component from two stereo sources (left and right). Each stereo pair shall have a sensitivity of 500mV, with an input impedance of 100k Ohms. The frequency response shall be 20Hz–20kHz ± 1 dB, and the signal to noise ratio (20Hz–20kHz band width limited) shall be at least 75dB. The input connectors shall be RCA phono jacks. The module shall operate from a ± 15 Vdc supply. The module shall be 2.8 inches (7.1 cm) high by 2.9 inches (7.4 cm) wide by 4.8 inches (12.2 cm) deep, and weigh 12.5 ounces (358 g).



2A45 Dual Input Module

The dual input module shall be Edwards Model 2A45 or an approved equal. The module shall provide two auxiliary inputs. The gain for both inputs shall be selectable from either -25dB or -5dB. The input sensitivity shall be 1V or 0.1V on both inputs. The frequency response of both inputs shall be 20Hz to 20,000Hz, plus or minus 1dB. The signal-to-noise ratio (20Hz to 20,000Hz bandwidth limited) shall be at least 75dB. The source impedance of both inputs shall be at least 10k ohms. Input connectors shall be screw terminals. The load impedance of both outputs shall be 5k ohms. The module shall operate from ± 15 Vdc (regulated) at 10mA. The module shall be 3 inches (7.6 cm) wide by 3 inches (7.6 cm) high and 5-1/4 inches (13.3 cm) deep, and shall weigh 12.5 ounces (354 g).



2A96A Mixer-Preamplifier

The Mixer/Preamplifier shall be the Edwards Model 2A96A or approved equal. The Mixer/Preamplifier shall provide the capacity of up to eight program inputs.



A bridging input/output circuit shall allow parallel operation with another 2A96A. The Mixer/Preamplifier shall have a low output impedance, capable of driving dual single-ended outputs to a nominal 1Vrms (+3.0dBm) and maximum 6Vrms (+18.0dBm) into a 600 ohm load impedance. The dual outputs shall be 180° out of phase and can be strapped to have an active balanced output capable of 12Vrms (+24dBm) into a 600 ohm load impedance. The Total Harmonic Distortion (THD) shall not exceed 0.5%, 20Hz to 20,000Hz, under specified conditions. Frequency response shall be ± 0.5 dB, 20Hz to 20,000Hz, with tone controls flat.

The Mixer/Preamplifier shall have integral circuitry to eliminate the popping during turn on and turn off functions. The unit shall have a 10-segment, color-coded, calibrated LED display in increments of 3dB. The unit shall have a bass and treble control that have ± 10 dB control at 100Hz (bass) and 10kHz (treble). A tone control bypass switch shall bypass the tone control circuitry. The Mixer/Preamplifier shall have priority muting for inputs 3, 4, 5, 6, 7 and 8 of at least 50dB. The unit must be capable of Master/Slave operations, allowing expansion of input capabilities up to 80 inputs.

The Mixer/Preamplifier shall be of modular construction to accept all Edwards Input Modules. The mixer/ preamplifier shall provide the number of inputs as specified in in the 2A Series Input Module Specifications.

The unit must be able to mount into a standard 19" (48.3 cm) mounting enclosure. Removal of the unit's mounting brackets shall allow the unit to be a portable as an enclosed unit for desk or table- top remote location mounting. The unit shall be 19" (48.3 cm) wide by 3-1/2" (8.9 cm) high and 11" (27.9 cm) deep. The unit shall operate on 120Vac, 60Hz at 6 watts and weigh no more than 12 pounds (5.44 kg), plus modules. The front panel shall have protective polycarbonate overlay on a charcoalcolored, baked enamel finish.

2A68A Remote Powered Mixer-preamplifier Panel

The Remote Powered Mixer-Preamplifier Panel shall be the Edwards Model 2A68A. The panel shall provide facilities for two low Z microphone inputs, one auxiliary input, and a bridging input. The microphone inputs shall be transformer-coupled, and the panel shall be protected from radio frequency interference. The mixer/preamplifiers shall provide the capacity of up to six microphone inputs.



The panel shall provide a single-ended audio output of 1Vrms (nominal) and require a 24Vdc to 30Vdc input of at least 50mA. The controls shall include individual microphone level controls, an auxiliary fader control, bass and treble controls, and a master volume control. The mixer/preamplifier shall be of a modular construction to accept up to 2 438-407 dual microphone kits. The panel shall require 1-3/4 inches (4.5 cm) of vertical space in a standard 19-inch (48.3 cm) equipment rack, and shall be finished in charcoal-colored, baked enamel.

Specifications

Preamps

Model 2A37

Microphone Gain (nominal)	45dB
Inputs	Two selectable microphone/auxiliary
Input Sensitivity	Microphone input: 300 microvolts Auxiliary input: 0.1V or 1V
Input Terminations	Screw terminals for microphones, RCA pin jacks for auxiliary
Frequency Response	20Hz to 20,000Hz, +/-1dB
Signal-to-noise Ratio	Microphones: +/- 60dB Auxiliaries: +/- 65dB
Source Impedance	Microphone: 150 Ohms to 200 Ohms, transformer-isolated Auxiliary: 10k Ohms
Selectable Frequency Roll-off	Flat or 320Hz at 6dB/octave roll-off
DC Power/Current	+/-15Vdc @ 10mA
Switches	Two input selection, two low-frequency roll-off
Dimensions	3" (7.6 cm) wide by 3" (7.6 cm) high and 5-1/4" (13.4 cm) deep
Weight	10.5 oz (297.7 g)
Finish	Charcoal-gray baked enamel on faceplate
Load Impedance	10k Ohms

2A40 Dual Stereo Summing Input Module

Input Sensitivity	500mV
Frequency Response	20Hz–20kHz, +/- 1dB
Inputs	input 1 left / right, input 2 left / right
Input Termination	RCA phono jack
Signal-to-noise	75dB, (20Hz–20kHz band limiting)
Ratio Power Requirement	+/- 15Vdc @ 10mA
Input Impedance	100k Ohms
Dimensions	2.8" (7.1 cm) high x 2.9" (7.4 cm) wide x 4.8" (12.2 cm) deep
Weight	12.5 ounces (354 g)
Controls	None
Finish	Charcoal gray faceplate

2A45 Dual Input Module

Inputs	Inputs 1 and 2: Dual Level Aux
DC Power Circuit	+/-15Vdc @ 10mA
Input Sensitivity	0.1V or 1V
Dimensions	3" (7.6 cm) wide by 3" (7.6 cm) high by 5-1/4" (13.3 cm)
Frequency Response	20Hz–20kHz (+/-1dB)
Weight	12.5 oz (354 g)
Signal-to-noise Ratio	0.1V Aux: ≥ 75dB 1V Aux: ≥ 75dB Bandwidth limited 20Hz–20kHz
Finish	Charcoal-gray baked enamel on faceplate
Source Impedance	Auxiliary: 10k Ohms
Load Impedance	5k Ohms
Input Termination	Auxiliaries: Screw terminals

2A96A Mixer-Preamplifier

Rated Output	Dual single-ended outputs, 6Vrms (+18.0dBm). Active balanced output, 12Vrms (+24dBm)
Output Load Impedance	600 ohms or greater, single-ended or balanced
Frequency Response	+/- 1/2dB, 20Hz to 20,000Hz (tone controls flat)
Distortion	Less than 0.50%, 20Hz to 20,000Hz
Sensitivity	(Dependent on input module) Typical: Microphone = 300mV (Lo Z) Auxiliaries = 0.1V/1V
Noise Level	MICROPHONE: Greater than -60dB AUXILIARY: Greater than -65dB MASTER CONTROL OFF: Greater than -85dB
Input Impedance	Bridging = Approximately 6k ohms (Dependent On Input Module)
Tone Controls	+/- 10dB (Boost and Cut). Bass @ 100Hz. Treble @ 10,000Hz.
Muting	Inputs 3 through 8 muted. "Master/Slave" allows all inputs muted Greater than 50dB
Controls	Eight Input level controls Bass and treble controls Master volume control Lighted power switch Tone control bypass switch (rear)
Power Requirements	120Vac, 60Hz, 6 watts
Temperature Range	-10° C to +60° C (12° F to 140° F)
Terminations	RCA phono jacks (master/slave, output 1, output 2, and bridging). Screw terminals (mixer outputs and muting)
Dimensions	3-1/2" (8.9 cm) high x 19" (48.3 cm) wide x 11" (27.9 cm) deep Desktop mounting (mounting brackets removed)
Weight	12 pounds (5.44 kg)
Finish	Cover: Textured, charcoal-colored baked enamel Chassis: Charcoal, baked enamel Front: Gray polycarbonate panel overlay
Associated Equipment	2A Series Edwards Input Modules 2A37, 2A40 and 2A45 input Modules.

2A68A Remote Powered Mixer-preamplifier Panel

Rated Output	Maximum +18dBm (600 Ohms load, single-ended) Nominal 1Vrms (+2dBm)
Distortion	Less than 0.25%, 20Hz to 20,000Hz
Frequency Response	+/-1dB, 20Hz to 20,000Hz (tone controls flat)
Sensitivity	Microphone: 0.25mV; Auxiliary: 0.1Vrms
Noise Level	Microphone: better than -63dBv (@ -67dBv input, BW 20,000Hz) Auxiliary: better than -75dBv (@ 0.1Vrms input, BW 20,000Hz) Master control off, -85dBv (@ nominal output)
Input Impedance	Microphone: 200 Ohms or less (for source impedances of 250W or less), balanced input Auxiliary: 100k Ohms (minimum), single-ended Bridging input: 100,000 Ohms (minimum), single-ended
Load Impedance	600 Ohms or greater, single-ended
Tone Controls	+/-12dB (boost and cut) bass 50Hz, treble 10,000Hz
Power Requirements	24Vdc to 30Vdc, 50mA
Dimensions	1-3/4" (4.5 cm) high, 19" (48.3 cm) wide, 8-1/2" (21.6 cm) deep
Finish	Charcoal-colored, baked enamel
Connections	Screw terminals and RCA phono jacks at rear of panel

Associated Equipment

17A437	Power Supply
438-407	Dual Microphone Adder Kit



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Ordering Information

Model	Description
2A37	Dual Input Module with selection switch for low frequency roll-offs
2A40	Dual Stereo Summing Input Module
2A45	Dual Input Module with selectable gain
2A96A	Mixer/Preamplifier
2A96A	Mixer-Preamplifier
2A68A	Remote Powered Mixer-preamplifier Panel
3A230	Bridging Transformer
17A437	Power Supply
438-407	Dual Microphone Kit
2A37	Input Module, Mic/Aux.
2A40	Input Module, Dual Stereo Aux.
2A45	Dual Module, Aux.